

1649

BIOTECHNOLOGY  
SYSTEMS  
BRANCH

12/10/99



TECH CENTER 1600/2900

# **RAW SEQUENCE LISTING** **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following CRF diskette:

Application Serial Number:

09/289346

Art Unit / Team No. :

01Pe

Date Processed by STIC:

4/20/99

**THE ATTACHED PRINTOUT EXPLAINS THE ERRORS DETECTED.**

**PLEASE BE SURE TO FORWARD THIS INFORMATION TO THE APPLICANTS BY EITHER:**

**1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANTS ALONG WITH A NOTICE TO COMPLY or,**

**2) CALLING APPLICANTS AND FAXING THEM A COPY OF THE PRINTOUT WITH A NOTICE TO COMPLY**

**THIS WILL INSURE THAT THE NEXT SUBMISSION RECEIVED FROM THEM WILL BE ERROR FREE.**

**IF YOU HAVE ANY FURTHER QUESTIONS, PLEASE CALL:**

**ARTI SHAH 703-308-4212**

# Raw Sequence Listing Error Summary

## ERROR DETECTED SUGGESTED CORRECTION

SERIAL NUMBER:

09/289346

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1      Wrapped Nucleics      The number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 2      Wrapped Aminos      The amino acid number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 3      Incorrect Line Length      The rules require that a line not exceed 72 characters in length. This includes spaces.  
All text must be visible on page.
- 4      Misaligned Amino Acid      The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs  
Numbering      between the numbering. It is recommended to delete any tabs and uses spacing between the numbers.
- 5      Non-ASCII      This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.  
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
- 6      Variable Length      Sequence(s)      contain n's or Xaa's which represented more than one residue.  
As per the rules, each n or Xaa can only represent a single residue.  
Please present the maximum number of each residue having variable length and  
indicate in the (ix) features section that some may be missing.
- 7      Wrong Designation      Sequence(s)      contain amino acid or nucleic acid designators which are not standard  
representations as per the Sequence Rules (Please refer to paragraph 1.822)
- 8      Skipped Sequences      Sequence(s)      missing. If intentional, please use the following format for each skipped sequence:  
(OLD RULES)      (2) INFORMATION FOR SEQ ID NO:X:  
                         (i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")  
                         (x1) SEQUENCE DESCRIPTION:SEQ ID NO:X:  
                         This sequence is intentionally skipped  
  
Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
- 9      Skipped Sequences      Sequence(s)      missing. If intentional, please use the following format for each skipped sequence.  
(NEW RULES)      <210> sequence id number  
                         <400> sequence id number  
                         000
- 10      Use of n's or Xaa's      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
(NEW RULES)      Use of <220> to <223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 11      Use of <213>Organism      Sequence(s)      are missing this mandatory field or its response.  
(NEW RULES)
- 12      Use of <220>Feature      Sequence(s)      are missing the <220>Feature and associated headings.  
(NEW RULES)      Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"  
Please explain source of genetic material in <220> to <223> section.  
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32)  
(Sec. 1.823 of new Sequence Rules)
- 13      PatentIn ver. 2.0 "bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted  
file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing).  
Instead, please use "File Manager" or any other means to copy file to floppy disk.

NOV 22 1999

OIPE

TECH CENTER 1600/2900

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/289,346

DATE: 04/20/1999  
TIME: 11:43:02

Input Set: I289346.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

Does Not Comply  
Corrected Diskette Needed

P.S

```
1 <110> APPLICANT: Hanley-Bowdoin, Linda
2   Orozco, Beverly M.
3 <120> TITLE OF INVENTION: Geminivirus Resistant Transgenic Plants
4 <130> FILE REFERENCE: 5051-458 Hanley-Bowdoin
5 <140> CURRENT APPLICATION NUMBER: US/09/289,346
6 <141> CURRENT FILING DATE: 1999-04-09
7 <160> NUMBER OF SEQ ID NOS: 16
8 <170> SOFTWARE: PatentIn Ver. 2.0
9 <210> SEQ ID NO 1
10 <211> LENGTH: 70
11 <212> TYPE: PRT
12 <213> ORGANISM: Tomato golden mosaic virus
13 <400> SEQUENCE: 1
14   Thr Leu Val Trp Gly Glu Phe Gln Val Asp Gly Arg Ser Ala Arg Gly
15       1             5             10             15
16   Gly Cys Gln Thr Ser Asn Asp Ala Ala Glu Ala Leu Asn Ala Ser
17             20             25             30
18   Ser Lys Glu Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys
19             35             40             45
20   Tyr Leu Phe Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe
21             50             55             60
22   Asp Lys Thr Pro Glu Pro
23       65             70
24 <210> SEQ ID NO 2
25 <211> LENGTH: 70
26 <212> TYPE: PRT
27 <213> ORGANISM: Tomato golden mosaic virus
28 <220> FEATURE:
29 <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
30   TGMV Rep protein (aa 110-179) with alanine
31   replacement (RS-R125).
32 <400> SEQUENCE: 2
33   Thr Leu Val Trp Gly Glu Phe Gln Val Asp Gly Ala Ala Ala Ala Gly
34       1             5             10             15
35   Gly Cys Gln Thr Ser Asn Asp Ala Ala Glu Ala Leu Asn Ala Ser
36             20             25             30
37   Ser Lys Glu Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys
38             35             40             45
39   Tyr Leu Phe Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe
40             50             55             60
41   Asp Lys Thr Pro Glu Pro
42       65             70
43 <210> SEQ ID NO 3
44 <211> LENGTH: 70
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**RAW SEQUENCE LISTING**  
**PATENT APPLICATION US/09/289,346**

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 TIME: 11:43:02

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45 <212> TYPE: PRT
46 <213> ORGANISM: Tomato golden mosaic virus
47 <220> FEATURE:
48 <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
49 TGMV Rep protein (aa 110-179) with alanine
50 replacements (E--N140 + KEE146)
51 <400> SEQUENCE: 3
52 Thr Leu Val Trp Gly Glu Phe Gln Val Asp Gly Arg Ser Ala Arg Gly
53 1 5 10 15
54 Gly Cys Gln Thr Ser Asn Asp Ala Ala Ala Ala Leu Ala Ala Ser
55 20 25 30
56 Ser Ala Ala Ala Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys
57 35 40 45
58 Tyr Leu Phe Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe
59 50 55 60
60 Asp Lys Thr Pro Glu Pro
61 65 70
62 <210> SEQ ID NO 4
63 <211> LENGTH: 70
64 <212> TYPE: PRT
65 <213> ORGANISM: Tomato golden mosaic virus
66 <220> FEATURE:
67 <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
68 TGMV Rep protein (aa110-179) with alanine
69 replacements (REK154)
70 <400> SEQUENCE: 4
71 Thr Leu Val Trp Gly Glu Phe Gln Val Asp Gly Arg Ser Ala Arg Gly
72 1 5 10 15
73 Gly Cys Gln Thr Ser Asn Asp Ala Ala Ala Glu Ala Leu Asn Ala Ser
74 20 25 30
75 Ser Lys Glu Glu Ala Leu Gln Ile Ile Ala Ala Ala Ile Pro Glu Lys
76 35 40 45
77 Tyr Leu Phe Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe
78 50 55 60
79 Asp Lys Thr Pro Glu Pro
80 65 70
81 <210> SEQ ID NO 5
82 <211> LENGTH: 70
83 <212> TYPE: PRT
84 <213> ORGANISM: Tomato golden mosaic virus
85 <220> FEATURE:
86 <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
87 TGMV Rep protein (aa 110-179) with alanine
88 replacements (EKY159)
89 <400> SEQUENCE: 5
90 Thr Leu Val Trp Gly Glu Phe Gln Val Asp Gly Arg Ser Ala Arg Gly
91 1 5 10 15
92 Gly Cys Gln Thr Ser Asn Asp Ala Ala Ala Glu Ala Leu Asn Ala Ser
93 20 25 30
94 Ser Lys Glu Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Ala Ala

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# RAW SEQUENCE LISTING PATENT APPLICATION US/09/289,346

DATE: 04/20/1999  
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95             35             40             45
96      Ala Leu Phe Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe
97             50             55             60
98      Asp Lys Thr Pro Glu Pro
99             65             70
100 <210> SEQ ID NO 6
101 <211> LENGTH: 70
102 <212> TYPE: PRT
103 <213> ORGANISM: Tomato golden mosaic virus
104 <220> FEATURE:
105 <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
106      TGMV Rep protein (aa110-179) with alanine
107      replacements (Q-HN165)
108 <400> SEQUENCE: 6
109      Thr Leu Val Trp Gly Glu Phe Gln Val Asp Gly Arg Ser Ala Arg Gly
110             1             5             10             15
111      Gly Cys Gln Thr Ser Asn Asp Ala Ala Glu Ala Leu Asn Ala Ser
112             20             25             30
113      Ser Lys Glu Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys
114             35             40             45
115      Tyr Leu Phe Ala Phe Ala Ala Leu Asn Ser Asn Leu Asp Arg Ile Phe
116             50             55             60
117      Asp Lys Thr Pro Glu Pro
118             65             70
119 <210> SEQ ID NO 7
120 <211> LENGTH: 70
121 <212> TYPE: PRT
122 <213> ORGANISM: Tomato golden mosaic virus
123 <220> FEATURE:
124 <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
125      TGMV Rep protein (aa110-179) with alanine
126      replacements (N-DR172)
127 <400> SEQUENCE: 7
128      Thr Leu Val Trp Gly Glu Phe Gln Val Asp Gly Arg Ser Ala Arg Gly
129             1             5             10             15
130      Gly Cys Gln Thr Ser Asn Asp Ala Ala Glu Ala Leu Asn Ala Ser
131             20             25             30
132      Ser Lys Glu Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys
133             35             40             45
134      Tyr Leu Phe Gln Phe His Asn Leu Asn Ser Ala Leu Ala Ala Ile Phe
135             50             55             60
136      Asp Lys Thr Pro Glu Pro
137             65             70
138 <210> SEQ ID NO 8
139 <211> LENGTH: 70
140 <212> TYPE: PRT
141 <213> ORGANISM: Tomato golden mosaic virus
142 <220> FEATURE:
143 <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
144      TGMV Rep protein (aa 110-179) with alanine

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**RAW SEQUENCE LISTING**  
**PATENT APPLICATION US/09/289,346**

 DATE: 04/20/1999  
 TIME: 11:43:02

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145      replacements (FQ118)
146  <400> SEQUENCE: 8
147      Thr Leu Val Trp Gly Glu Ala Ala Val Asp Gly Arg Ser Ala Arg Gly
148          1              5              10              15
149      Gly Cys Gln Thr Ser Asn Asp Ala Ala Ala Glu Ala Leu Asn Ala Ser
150          20              25              30
151      Ser Lys Glu Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys
152          35              40              45
153      Tyr Leu Phe Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe
154          50              55              60
155      Asp Lys Thr Pro Glu Pro
156          65              70
157  <210> SEQ ID NO 9
158  <211> LENGTH: 70
159  <212> TYPE: PRT
160  <213> ORGANISM: Tomato golden mosaic virus
161  <220> FEATURE:
162  <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
163      TGMV Rep protein (aa110-179) with alanine
164      replacement (D120)
165  <400> SEQUENCE: 9
166      Thr Leu Val Trp Gly Glu Phe Gln Val Ala Gly Arg Ser Ala Arg Gly
167          1              5              10              15
168      Gly Cys Gln Thr Ser Asn Asp Ala Ala Ala Glu Ala Leu Asn Ala Ser
169          20              25              30
170      Ser Lys Glu Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys
171          35              40              45
172      Tyr Leu Phe Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe
173          50              55              60
174      Asp Lys Thr Pro Glu Pro
175          65              70
176  <210> SEQ ID NO 10
177  <211> LENGTH: 70
178  <212> TYPE: PRT
179  <213> ORGANISM: Tomato golden mosaic virus
180  <220> FEATURE:
181  <223> OTHER INFORMATION: Description of Artificial Sequence: Fragment of
182      TGMV Rep protein (aa110-179) with leucine
183      replacements (AAA136)
184  <400> SEQUENCE: 10
185      Thr Leu Val Trp Gly Glu Phe Gln Val Asp Gly Arg Ser Ala Arg Gly
186          1              5              10              15
187      Gly Cys Gln Thr Ser Asn Asp Leu Leu Leu Glu Ala Leu Asn Ala Ser
188          20              25              30
189      Ser Lys Glu Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys
190          35              40              45
191      Tyr Leu Phe Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe
192          50              55              60
193      Asp Lys Thr Pro Glu Pro
194          65              70

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/289,346

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TIME: 11:43:02

Input Set: I289346.RAW

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195 <210> SEQ ID NO 11
196 <211> LENGTH: 356
197 <212> TYPE: PRT
198 <213> ORGANISM: Tomato golden mosaic virus
199 <400> SEQUENCE: 11
200 Met Pro Ser His Pro Arg Phe Gln Ile Asn Ala Lys Asn Tyr Phe Leu
201      1          5          10          15
202 Thr Tyr Pro Gln Cys Ser Leu Ser Lys Glu Glu Ser Leu Ser Gln Leu
203      20          25          30
204 Gln Ala Leu Asn Thr Pro Ile Asn Lys Lys Phe Ile Lys Ile Cys Arg
205      35          40          45
206 Glu Leu His Glu Asp Gly Gln Pro His Leu His Val Leu Ile Gln Phe
207      50          55          60
208 Glu Gly Lys Tyr Cys Cys Gln Asn Gln Arg Phe Phe Asp Leu Val Ser
209      65          70          75          80
210 Pro Thr Arg Ser Ala His Phe His Pro Asn Ile Gln Arg Ala Lys Ser
211      85          90          95
212 Ser Ser Asp Val Lys Thr Tyr Ile Asp Lys Asp Gly Asp Thr Leu Val
213      100         105         110
214 Trp Gly Glu Phe Gln Val Asp Gly Arg Ser Ala Arg Gly Gly Cys Gln
215      115         120         125
216 Thr Ser Asn Asp Ala Ala Ala Glu Ala Leu Asn Ala Ser Ser Lys Glu
217      130         135         140
218 Glu Ala Leu Gln Ile Ile Arg Glu Lys Ile Pro Glu Lys Tyr Leu Phe
219      145         150         155         160
220 Gln Phe His Asn Leu Asn Ser Asn Leu Asp Arg Ile Phe Asp Lys Thr
221      165         170         175
222 Pro Glu Pro Trp Leu Pro Pro Phe His Val Ser Ser Phe Thr Asn Val
223      180         185         190
224 Pro Asp Glu Met Arg Gln Trp Ala Glu Asn Tyr Phe Gly Lys Ser Ser
225      195         200         205
226 Ala Ala Arg Pro Glu Arg Pro Ile Ser Ile Ile Ile Glu Gly Asp Ser
227      210         215         220
228 Arg Thr Gly Lys Thr Met Trp Ala Arg Ser Leu Gly Pro His Asn Tyr
229      225         230         235         240
230 Leu Ser Gly His Leu Asp Leu Asn Ser Arg Val Tyr Ser Asn Lys Val
231      245         250         255
232 Glu Tyr Asn Val Ile Asp Asp Val Thr Pro Gln Tyr Leu Lys Leu Lys
233      260         265         270
234 His Trp Lys Glu Leu Ile Gly Ala Gln Arg Asp Trp Gln Thr Asn Cys
235      275         280         285
236 Lys Tyr Gly Lys Pro Val Gln Ile Lys Gly Gly Ile Pro Ser Ile Val
237      290         295         300
238 Leu Cys Asn Pro Gly Glu Gly Ala Ser Tyr Lys Val Phe Leu Asp Lys
239      305         310         315         320
240 Glu Glu Asn Thr Pro Leu Lys Asn Trp Thr Phe His Asn Ala Lys Phe
241      325         330         335
242 Val Phe Leu Asn Ser Pro Leu Tyr Gln Ser Ser Thr Gln Ser Ser Asn
243      340         345         350
244 Asn Xaa Asn Ser

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*see item 10 on Eva summary sheet*

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VERIFICATION SUMMARY  
PATENT APPLICATION US/09/289,346

DATE: 04/20/1999  
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Input Set: I289346.RAW

Line ? Error/Warning

Original Text

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244 W "N" or "Xaa" used: Feature required

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Asn Xaa Asn Ser